REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

Claims 4 and 5 are currently being cancelled.

Claims 1, 6, 7 and 18 are currently being amended.

No claims are currently being added.

This amendment and reply cancels and amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After canceling and amending the claims as set forth above, claims 1-3, 6-12 and 18-20 are now pending in this application for examination on the merits, whereby claims 13-17 are withdrawn from consideration as being directed to a non-elected species.

Claim Rejections – Written Description:

In the final Office Action, claims 1 and 18 were rejected under 35 U.S.C. § 112, 1st paragraph, as failing to comply with the written description requirement, for the reasons set forth on pages 2 and 3 of the Office Action. By way of this amendment and reply, claim 1 has been amended to remove the language in that claim that was alleged to lack sufficient written description support. With respect to claim 18, that claim has also been amended to remove the language in that claim that was alleged to lack sufficient written description support, as well as to clarify certain features in that claim.

Accordingly, presently pending claims 1 and 18 are believed to fully comply with 35 U.S.C. § 112, 1st paragraph.

Claim Rejections – Indefiniteness:

In the final Office Action, claims 1, 4 and 18 were rejected under 35 U.S.C. § 112, 2nd paragraph, as being indefinite, for the reasons set forth on pages 3-6 of the Office Action. By

way of this amendment and reply, claims 1, 4 and 18 have been amended to address the 'indefiniteness' issues raised in the final Office Action. Accordingly, presently pending claims 1, 4 and 18 are believed to fully comply with 35 U.S.C. § 112, 2nd paragraph.

Claim Rejections – Prior Art:

In the final Office Action, claims 1-5 and 18 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2003/01284552 to Chadha in view of U.S. Patent No. 5,636,336 to Adachi; claims 6-12 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chadha in view of Adachi and further in view of U.S. Patent No. 5,726,947 to Yamazaki; and claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Chadha in view of Adachi and further in view of U.S. Patent No. 5,644,758 to Patrick et al. These rejections are traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

Presently pending independent claim 1 now includes the features of canceled claims 4 and 5 (along with other features), and recites, among other things:

wherein said data transfer of said first bitmap data from said work memory to said display memory is performed such that a set of data bits of said first bitmap data making are transferred at the same time,

wherein said first bitmap data includes a plurality of line data each associated with a line of pixels of an image represented by said second bitmap data to be displayed on said display panel, and

wherein said data transfer of said first bitmap data from said work memory to said display memory is performed such that each of said line data is transferred at the same time from said work memory to said display memory.

Based on the above features now explicitly recited in claim 1, data can be transferred from a work memory to a display memory, and then displayed on a display panel, in a much faster way than what is possible in conventional controller drivers.

In more detail, the capability to *transfer lines of data at the same time from a work memory to a display memory* allows for fast display of image data.

Turning now to the cited art of record, the final Office Action cites paragraph 0038 and 0040, along with Figure 6 of Chadha, for allegedly teaching the features recited in claims 4 and 5. Applicants disagree with these assertions made in the final Office Action.

Namely, paragraph 0038 of Chadha merely describes that a Graphics Engine 606 reads entries from an Object Table in an RDM 600 via event 614, and generates image display data to be output to a processed image buffer of a PIM 602 via event 606. There is nothing in paragraph 0038 of Chadha that teaches or suggests the transfer of *lines of data at the same time from a work memory to a display memory.* Paragraph 0040 of Chadha describes that an FBM 604 contains data in pixel display form, whereby the size of this memory is C x R x B bits. There is nothing in paragraph 0040 of Chadha that describes the manner in which data is written into the FBM 604 or the manner in which data is read from the FBM 604. Figure 6 of Chadha merely is a high level block diagram showing connectivity between graphics engines 606, 608, 610 and different memories 600, 602, 604.

Accordingly, since Chadha does not teach or suggest the above-highlighted features recited in claim 1, and since Adachi does not rectify these deficiencies of Chadha, that claim is patentable over the cited art of record.

With respect to dependent claim 12, that claim now recites:

a timing controller controlling said work memory, and said display memory, and said driver circuit,

wherein said driver circuit is connected to said second bit lines, and

wherein said timing controller is adapted to deactivate said display memory to allow said first bitmap data to be transmitted from said work memory to said driver circuit through said second bit lines.

In its rejection of claim 12, the Office Action asserts that column 3, lines 39-44 and Figure 26 of Yamazaki teaches that a controller is adapted to deactivate a display memory to allow first bitmap data to be transmitted from a work memory to a driver circuit through second bit lines. Applicants respectfully disagree with this assertion, since column 3, lines 39-44 of Yamazaki merely describes that a selector selects data, which is then transmitted to a main amplifier. No deactivation of a display memory or any other device is described in this

portion of Yamazaki, whereby Figure 26 of Yamazaki also does not show any deactivation of a display memory.

Accordingly, presently pending dependent claim 12 is patentable over the cited art of record for these additional reasons, beyond the reasons given above for its base claim.

The above arguments with respect to claim 12 were presented in the previously-filed response, whereby the final Office Action maintains the same rejection as before, and does not address Applicants' arguments made in the previously-filed response. It is respectfully requested that if this rejection is maintained, those arguments be addressed in the next PTO correspondence to Applicants.

With respect to dependent claim 18, that claim now recites:

a memory controller that controls said work memory, said display memory and said driver circuit, said memory controller being directly connected to a processor for receiving additional bitmap data to be displayed on said display panel, said additional bitmap data not being stored at any time in said work memory,

wherein said second bit data corresponds to an image and that can be directly used to display the image on said display panel, said second bitmap data corresponding to said first bitmap data provided from said work memory together with said additional bitmap data provided from said memory controller, and

wherein said display memory is directly connected to said work memory.

The capability of providing bitmap data to be displayed, via the memory controller, to be displayed along with bitmap data stored in the work memory (see page 21, lines 1-12 of the specification), provides an additional basis of patentability for claim 18, beyond the reasons given above for its base claim.

Dependent claim 20 recites a transferring means and a displaying means, and it also recites that a first rate at which the first bitmap data is transferred from the work memory to the display memory is faster than a second rate at which the second bitmap data is output from the display memory for display on the display panel. In its rejection of claim 20, the

final Office Action asserts that column 2, lines 1-10 of Patrick teaches the features recited in this claim, but Applicants respectfully disagree.

Namely, column 2, lines 1-10 of Patrick merely describes that the slower the rate of block transfers of data between memory locations, the slower the rate at which a computer system operates. This says nothing about having one block transfer rate between a first memory and a second memory and having a second block transfer rate (different from the first block transfer rate) between the second memory and another device (e.g., a display). Rather, Patrick would appear to teach having a same, fast transfer rate between all of the devices in his display system, which is totally different from the specific features recited in claim 20.

Thus, dependent claim 20 patentably distinguishes over the cited art of record for these additional reasons, beyond the reasons given above for its base claim.

Conclusion:

Since all of the issues raised in the final Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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